

REMARKS

This amendment is responsive to the Final Office Action dated May 2, 2002. Enclosed is a petition for a one-month extension of time to respond and a check to cover the surcharge fee, plus the fee for filing this continuation application.

Claim 26 has been canceled. Claim 25 and claims 27 and 28 have been amended. Claims 8-20, 25, and 27-32 are pending.

In view of the above application and the following remarks, the applicants respectfully request favorable consideration of the application.

For ease of reference, applicant's remarks, below, are preceded by quotations of the related comments of the examiner, in small, bold-face type.

Claim Rejections -35 USC § 112

1. **The following is a quotation of the second paragraph of 35 U. S. C. 112:**

 The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. **Claim 29 is rejected under 35 U. S. C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**
3. **It is unclear in lines 1-3 of claim 29 whether a "means for accepting payments in units of different denominations" or "means for performing vends, or "means for determining that insufficient change is available" or a "means for dispensing change" is being claimed.**

Claim 29 is drafted in such a way that the same means may be used for accepting payments in units of different denominations, for performing vends, for determining that insufficient change is available and for dispensing change. One skilled in the art would recognize that such means may be in the form of one component, such as a microprocessor, or in separate components that work together such that if insufficient change is available, either a lesser amount of change is dispensed or a requested vend is inhibited as recited. Therefore, claim 29 is not indefinite. In view of these remarks, the applicant respectfully requests withdrawal of the 35 U.S.C. § 112, ¶ 2 rejection.

Claim Rejections -35 USC § 103

4. The following is a quotation of 35 U. S. C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 8-20 and 25-32 are rejected under 35 U. S. C. 103(a) as being unpatentable over Morun (US 5,566,807). Morun discloses the vending machine as follows

As described in Claims 8-10, 12, 14-18, 20, 26 and 29;

1. a vending machine (1) operable to accept payments in units of different denominations, to perform vends, and to dispense change corresponding to the difference between payments and vend prices;
2. a vending machine further operable in response to determining that insufficient change is available (see figure 8, element 900) either (i) to dispense a lesser amount of change or (ii) to inhibit a requested vend (see figure 9, element 1002), depending on whether the difference between the available change and the correct change is equal to or less than a predetermined allowable overpay amount (see figure 7)
3. the vending machine has means permitting alteration of a stored parameter defining the predetermined allowable overpay amount (see figure 5, elements (420 and 430));

As described in Claims 8, 17 and 19-20, 25, 27 and 29;

4. the vending machine is operable to provide a warning indication prior to initiation of a transaction if the available change meets a predetermined criterion (95) (see also col. 11, lines 3-24);

As described in Claim 29;

5. the warning indication is provided only if the allowable overpay amount is non-zero (note that the warning indication as described in col. 11, lines 3-24 will not be provided where the customer submits an amount that is the price of the item desired).

As described in Claim 30;

6. said predetermined criterion is met when the available change is less than the value of the lowest denomination non-refundable payment unit (see figure 8);

As described in Claim 31;

7, said vending machine is operable to provide an "exact change" indication to a customer when a requested vend is inhibited (again, note display (95), thereby providing ability and capability to display such information);

As described in Claims 11, 28 and 32;

8. the machine is operable, when inhibiting a vend, to permit the customer to request a vend at a different price (note that the customer is capable of requesting a vend at a different price when the machine becomes disabled (1106)).

As described in Claim 13;

10. the circumstances giving rise to the second indication also cause the deposited monetary unit to be refunded (see figures 10a and 10b);

Claim 8 recites a "vending machine having display means arranged to give first and second indications that insufficient change may be available to a customer making a purchase, the first indication being given as a warning prior to a transaction being initiated, and the second indication being given after a transaction has been initiated, each indication being produced in response to the detection of a respective set of conditions." Rejected claims 16 and 17 contain similar elements in which the "conditions" are specified in more detail. It is respectfully asserted that Morun does not teach or suggest two different conditions for issuing a warning before and after a transaction is being initiated. Column 11, lines 3-24 of Morun was cited to support the obvious rejections of claims 8, 16 and 17. However, that section describes operation of a vending machine in a "force vend" mode. In this mode a user is instructed on a display to make a selection or to deposit more money. No mention is made of a first and second indication being given as a warning prior to a transaction being initiated. Thus claims 8, 16 and 17 are patentably distinct over Morun. Since claims 9-15, 18 and 19 all directly or indirectly depend on either claim 8, 16 or 17, they also should be allowable for at least the same reasons.

Independent claim 20 has also been rejected for allegedly being unpatentable over Morun. Claim 20 recites a "vending machine which has a display means . . . to provide an "insufficient change" indication and to allow selection of a product of different price." Column 11, lines 3-24 of Morun was cited in support of the rejection of claim 20. However, as explained above, that section describes operation of a vending machine in a "force vend" mode. In this mode a user is instructed on a display to make a selection or deposit more money. The Morun patent teaches to

inhibit acceptance of an inserted coin if insufficient change is available. No mention is made of an "insufficient change" indication and allowing selection of a product of different price. Morun thus does not teach or suggest such operation, and claim 20 is patentably distinct thereover.

Independent claim 25 has been rejected for being unpatentable over Morun. Claim 25 has been amended and recites a "vending machine which is operable to prevent acceptance of a monetary unit in dependence on the availability of monetary units for dispensing as change and . . . having display means arranged to provide an indication to a customer in response to receipt of a monetary unit which is so prevented from being accepted." Consequently, claim 26 has been cancelled, and claims 27 and 28 amended to correct their dependencies. No new matter has been added. In contrast, Morun teaches that the vending machine may instruct customers to deposit lower denomination coins first to increase the probability of accepting non-tubed high-value coins. Morun does not teach or suggest to provide an indication to a customer in response to receipt of a monetary unit which is prevented from being accepted. Thus, the applicants respectfully assert that claim 25 is patentably distinct from Morun. Since claims 27 and 28, as amended, directly depend on claim 25, they should also be allowable for at least the same reasons.

Claim 29 recites "a vending machine comprising . . . means for providing a warning indication prior to initiating a transaction if the available change meets a predetermined criteria and if the allowable overpay amount is non-zero; and means for permitting alteration of a stored parameter defining the allowable overpay amount." In contrast, Morun teaches instructing customers, via a display, to deposit lower denomination coins first to increase the probability of acceptance of non-tubed high-value coins. (See col. 12, lines 16-19) This instruction does not provide a warning that change in the machine may be inadequate to provide a refund. Thus, since Morun does not teach or suggest to provide a warning indication prior to initiating a transaction if the available change meets a predetermined criteria, claim 29 is patentably distinct thereover.

In view of the above remarks, the applicant respectfully requests withdrawal of the 35 U.S.C. §103(a) rejection of claims 8-20, 25, and 27-32 based on Morun.

6. Claims 8-10, 12, 14-18, 20, 26 and 29 rejected under 35 U. S. C. 103(a) as being unpatentable over Tedesco et al (US 6,085,888). Tedesco et al discloses the

vending machine as follows.

As described in Claims 8-I 0, 12, 14-18, 20, 26 and 29;

- 1. a vending machine (100) operable to accept payments in units of different denominations, to perform vends, and to dispense change corresponding to the difference between payments and vend prices;**
- 2. a vending machine further operable in response to determining that insufficient change is available (see figure 8a, element 820) either (i) to dispense a lesser amount of change or (ii) to inhibit a requested vend (see figure 8a, element 822), depending on whether the difference between the available change and the correct change is equal to or less than a predetermined allowable overpay amount; (Note that the amount of overpay can be reasonably construed as being that amount in excess of the amount needed to purchase an item, and that said price of said item can be reasonably construed as being a predetermined amount. Therefore, any amount above the item price is predetermined to be an overpay.)**
- 3. the vending machine has means permitting alteration of a stored parameter defining the predetermined allowable overpay amount (see figure 1 b, noting processor (144) which necessarily allows input and storage of item prices);**

As described in Claims 8, 17 and 19-20, 25, 27 and 29;

- 4. the vending machine is operable to provide a warning indication prior to initiation of a transaction if the available change meets a predetermined criterion (see figure 8a, elements (820 and 822));**

Independent claims 8, 16-17, 20 and 29 have been rejected for allegedly being unpatentable in view of Tedesco et al. Each of these claims recite a vending machine having a display means to give an indication about the amount of change available. Nothing in Tedesco et al. teaches or suggests a vending machine having a display means to give an indication about the amount of change available. Tedesco et al. relates to a method of subscription vending. The method allows customers who frequently make purchases at a vending machine to receive items without paying every time the customer requires an item. Instead, the customer registers a subscription once to purchase a plurality of items dispensed by a vending machine within a predetermined period of time. Reference numbers 820 and 822 of FIG. 8A of Tedesco et al. were cited to support the rejection of claims 8, 16-17, 20 and 29. However, FIG. 8A is a flow chart illustrating steps used to validate a subscription registration request. Reference numeral 820 is a decision box of a flow chart that determines whether sufficient payment is received to cover a subscription price. If sufficient payment is not received, reference numeral 822 indicates that an "insufficient payment" message will be displayed on a display. No mention is made of a

vending machine having a display means to give an indication about the amount of change available. Thus, the Tedesco et al. vending machine is not capable of determining whether sufficient change is available for purchase. Consequently, claims 8, 16-17, 20 and 29 are patentably distinct thereover. Since claims 9-10, 12, 14-15, 18 and 30-32 all directly or indirectly depend on one or more of claims 8, 16-17, 20 and 29, they also should be allowable for at least the same reasons.

In view of the above remarks, the applicant respectfully requests withdrawal of the 35 U.S.C. § 103(a) rejections based on Tedesco et al.

7. Claims 8-10, 12, 14-18, 20, 26 and 29 are rejected under 35 U. S. C. 103(a) as being unpatentable over Ramsey et al (US 6,055,521). Ramsey et al discloses the vending machine as follows.

As described in Claims 8-10, 12, 14-18, 20, 26 and 29;

- 1. a vending machine (35) operable to accept payments in units of different denominations, to perform vends, and to dispense change corresponding to the difference between payments and vend prices;**
- 2. a vending machine further operable in response to determining that insufficient change is available (see figures 5, 15a and 15b), either (i) to dispense a lesser amount of change or (ii) to inhibit a requested vend, depending on whether the difference between the available change and the correct change is equal to or less than a predetermined allowable overpay amount; (Note that the amount of overpay can be reasonably construed as being that amount in excess of the amount needed to purchase an item, and that said price of said item can be reasonably construed as being a predetermined amount. Therefore, any amount above the item price is predetermined to be an overpay.)**
- 3. the vending machine has means permitting alteration of a stored parameter defining the predetermined allowable overpay amount (note that PC (27) necessarily allows input and storage of item prices);**

As described in Claims 8, 17, 19-20, 25, 27 and 29;

- 4. the vending machine is operable to provide a warning indication prior to initiation of a transaction if the available change meets a predetermined criterion (see figures 5, 15a and 15b);**

Each of independent claims 8, 16-17, 20 and 29 recite a vending machine having a display means to give an indication about the amount of change available. Nothing in Ramsey et al. teaches or suggests a vending machine having a display means to give an indication about the amount of change available. Ramsey et al. relates to a system for selling and dispensing fluids

with change making capabilities, which may be used for unattended sale and dispensing of motor fuels. The system includes a currency and/or coin dispenser for providing the purchaser with change for his purchase. FIGS. 5, 15A and 15B has been cited to support the rejection of claims 8, 16-17, 20 and 29. However, FIG. 5, 15 and 15B are flow charts illustrating control sequences executed by components of embodiments of Ramsey. The flow charts describe the steps involved to purchase fuel using a credit or debit card or cash. No mention is made of a vending machine having a display means to give an indication about the amount of change available. Thus, the Ramsey et al. system for selling and dispensing fluids is not capable of determining whether sufficient change is available for purchase. Consequently, claims 8, 16-17, 20 and 29 are patentably distinct thereover. Since claims 9-10, 12, 14-15, 18 and 30-32 all directly or indirectly depend on one or more of claims 8, 16-17, 20 and 29, they also should be allowable for at least the same reasons. Thus, the applicants respectfully request withdrawal of the 35 U.S.C. § 103(a) rejections based on Ramsey et al.

Double Patenting

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F. 3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F. 2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Omum*, 686 F. 2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F. 2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F. 2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.313(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 8-20 and 25-32 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-15 of copending Application No. 09/528,255. Although the conflicting claims are not identical, they are not patentably distinct from each other because the scaling factor described in the claims of the '255 patent can be reasonably construed by those ordinarily skilled in the art as the functional equivalent of the "overpayment amount" described in the claims of the present application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

10. Claims 8-20 and 25-32 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-15 of copending Application No. 09/528,255 in view of Morun. Although the conflicting claims are not identical, they are not patentably distinct from each other because the scaling factor described in the claims of the '255 patent can be reasonably construed by those ordinarily skilled in the art as the functional equivalent of the "overpayment amount" described in the claims of the present application. In addition, the claims of Morun disclose an overpayment process.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 8-20 and 25-32 have been provisionally rejected under the judicially created doctrine of obviousness-type double patenting as allegedly being unpatentable over Claims 1-15 of copending Application No. 09/528,255 and as being unpatentable over Claims 1-15 of copending Application No. 09/528,255 in view of Morun. The applicants respectfully traverse these double patenting rejections.

A scaling factor as described in the claims of the '255 patent application cannot be reasonably construed by one of ordinary skill in the art as the functional equivalent of the "overpayment amount" described in the claims of the present application. According to the '255 patent application, monetary values may be transmitted between different parts of a vending machine in arbitrary units. For this information to be meaningful, each part stores information specifying the units being used by the other part. The information stored by one part of a vending machine (e.g., money validator) specifying the units of monetary value being used by another part of the vending machine (e.g., vend controller) is referred to as a scaling factor. For example, the vend controller may be informed of every coin which is found to be acceptable by the money validator. A signal is sent to the vend controller indicating the value of the accepted coin. In order for this information to be meaningful, the vend controller needs to know the values of the units in which the amount is transmitted, i.e., the scaling factor.

In one aspect of the '255 patent application, a money validator calculates an appropriate scaling factor by taking into account various parameters, such as the values associated with the denominations it is intended to accept or dispense, and transmits this scaling factor to a controller of a vending machine (see claims 2-5, 15 and page 3, lines 3 – 7 of the application). According to another aspect, a money validator is operable to inhibit acceptance of currency units in

response to a supplied scaling factor (see claims 6-8, 14 and page 3, lines 16 – 18 of the application). According to a further aspect, a money validator is operable in either of two modes. In the first mode, the money validator responds to a supplied scaling factor for selectively inhibiting acceptance of one or more denominations. In the second mode, the money validator calculates a scaling factor on the basis of the values of denominations that the money validator is capable of accepting (see claim 1 and page 4, lines 13 – 18 of the application).

According to an implementation of the present application, a vending machine may be arranged so that a product is vended when the customer has inserted more than the correct price of the product, even when insufficient change is available. The excess amount paid by the customer is the overpay amount. (pg. 1, lines 17-22) In other words, the overpay amount is the amount by which the correct change may exceed the available change without inhibiting an operation for the vending machine. (pg. 4, lines 12-15)

This overpay amount is used to enable a vending machine to accept coins, make change and vend a product while allowing a customer to slightly overpay so that she will still receive the desired item. The apparatus of the present invention does not require that parts of the vending machine store information specifying the units of monetary value being used by another part of the vending machine. Consequently, the applicant respectfully asserts that the overpay amount of the present application cannot be reasonably construed by those ordinarily skilled in the art as the functional equivalent of the scaling factor of the '255 patent application.

In view of the above remarks, applicants respectfully request withdrawal of the double patenting rejection.

Response to Arguments

11. Applicants arguments filed 2/21/02 have been fully considered but they are not persuasive. Regarding Independent Claims 8, 16, 17, 20, 25 and 29, Morun discloses a display (95) which is capable of being used for displaying information. Morun also discloses dispensing a lesser amount of change (see element 1004 in figure 9, for example), or inhibiting a vend (see elements 1001 and 1002 of figure 9). At the very least, it would have been obvious for one ordinarily skilled in the art to use the display means provided by Morun to display such information as it would be expected that in order for the system of Morun to work, it is necessarily so that information would have to be displayed before and after a transaction. For example, note Morun abstract, lines 7-1', col. 2, lines 9-32, col. 9, lines 58-67 and col. 12, lines 16-19. In addition, note Gustin et al (US 5,987,439), figure 20H, for example, which indicates determination of a transaction amount, comparing this

amount to credit available in an account or by cash, and indicating a similar process as Applicants. Note also, Gustin et al, figure 21 F, for example, indicating the transaction price and amount inserted into the machine. This screen could be construed as a warning to a customer that less than the transaction amount has been deposited. See also figure 16a, elements 522, 528 and 536 may also be construed as warnings that are used before, during and after a transaction has been made. Note that figure 17 discloses elements (572, 576, 578, 580, and 586 which may all be construed as warnings or indications to the customer during the transaction process, where he is given the ability to change an amount of cash to receive. Further regarding Claim 20, note that it would again be expedient for one ordinarily skilled in the art to allow a customer to choose another product based upon the information necessarily required for the process of Morun to work, since it can be envisioned that a customer, instead of paying a certain amount over a particular price for a particular product, might choose another product not requiring an overpay amount. Regarding Claim 25, it would also be obvious to one ordinarily skilled in the art to provide an overpay amount which would be in response to one particular coin, since, for example, the one dollar US coin has been used in vending machines. At the very least, as inflation over time causes prices to rise, it would be envisioned that a vending machine would have to accept one dollar coins in order to be more efficient to a customer attempting to purchase higher-priced items.

The applicants respectfully assert that it would not have been obvious for one of ordinary skill in the art to use the display means provided by Morun to give an indication about the amount of change available because Morun teaches to inhibit acceptance of an inserted coin if insufficient change is available. Morun does not teach or suggest issuing an indication about the amount of change available so that the customer may select a product of a different price. To display such a message would require the machine of Morun to perform an additional step, which would reduce overall system performance.

Regarding the comments concerning claim 20, Morun's system decides whether a high-value coin should be accepted or disabled depending on the available amount of change. This determination is made before the transaction and independent of the item selected whether enough change is available for all the vend prices. (Morun, col.2, lines 3-22) Thus Morun, does not teach or suggest to compare the difference between the value of deposited money and the product price with the available change and then to inhibit the vend based on this difference. The addition of this feature cannot be obvious in view of Morun because in the procedure described above in Morun, all vend prices are taken into account and the procedure does not change if a customer selects another item (i.e., the coin will still not be accepted and the vend will not take place when another item is selected by the customer). Therefore, the system

described in Morun cannot be modified to allow a customer to select another product of a different price in order to avoid overpayment.


Gustin has been cited for allegedly suggesting a process similar to that claimed in the present application. However, Gustin relates to an automatic banking machine, such as an ATM machine, which allows not only the dispensing of cash, but allows the performing of other banking functions, such as the payment of bills, wire transfers or cashing checks. The related figure and cited passages relate to entering amounts of money in an automatic banking machine and displaying the amount of money to a customer (see Figures 16 and 17) or to displaying a price of an item to be purchased and an amount of money inserted by a customer. However, they do not at all relate to displaying indications that insufficient change may be available. More particularly, these figures and passages do not teach or suggest the claimed elements of the present invention, and thus the applicants respectfully assert that Gustin is irrelevant.

Attached is a marked-up version of the changes being made by the current amendment.

In view of the above amendments and remarks, applicant asks that all claims be allowed. Please apply any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: 29 AUGUST 2002


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Version with markings to show changes made

In the claims:

25. (Amended) A vending machine which is operable to prevent acceptance of a monetary unit in dependence on the availability of monetary units for dispensing as change [, the]and operable to inhibit a vend operation in dependence on a vend price, a credit value corresponding to the value of one or more accepted monetary units and the availability of monetary units for dispensing as change, said vending machine having display means arranged to provide an indication to a customer in response to receipt of a monetary unit which is so prevented from being accepted.

27. (Amended) A vending machine as claimed in claim 25 [26], wherein the display means is arranged to provide an indication to a customer when a vend operation is inhibited.

28. (Amended) A vending machine as claimed in claim 25 [26], wherein the machine is arranged, when a vend has been inhibited, to allow a customer to select a vend at a different price.